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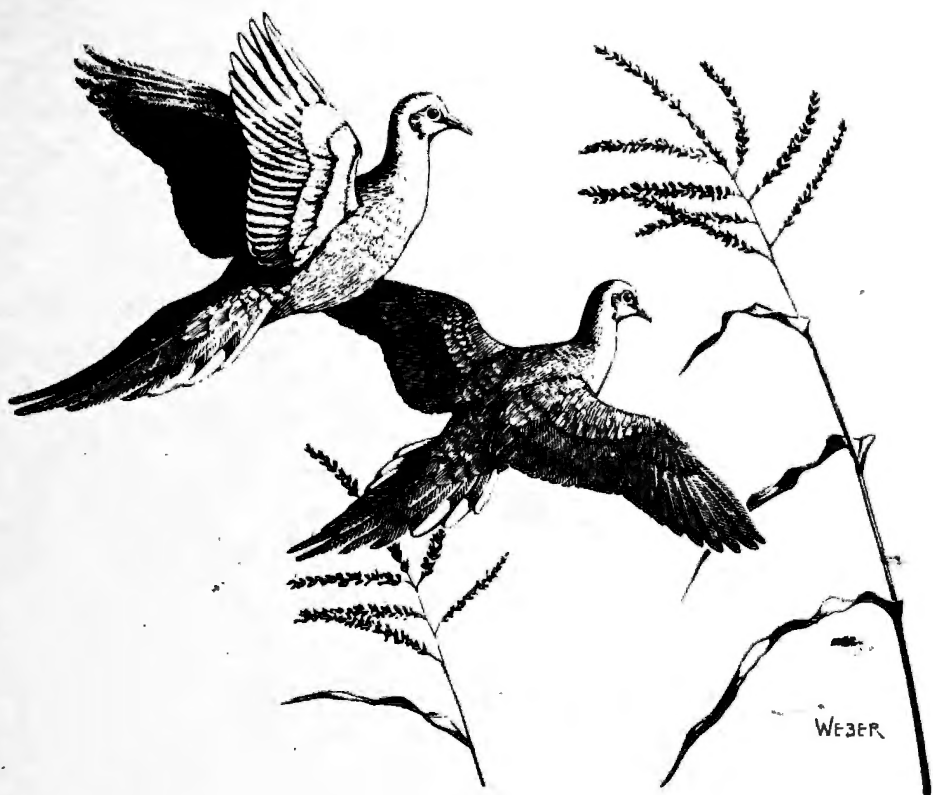
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MOURNING DOVE STATUS REPORT

1962



UNITED STATES DEPARTMENT OF THE INTERIOR
FISH AND WILDLIFE SERVICE
BUREAU OF SPORT FISHERIES AND WILDLIFE
Special Scientific Report--Wildlife No. 70

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MOURNING DOVE STATUS REPORT, 1962

Compiled by

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Bureau of Sport Fisheries and Wildlife



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ABSTRACT

An index to the 1962 mourning dove breeding population was obtained by a call-count survey conducted throughout the United States. Trends in the breeding population index were calculated for three management units and for hunting and nonhunting States within the management units. Trends in the breeding population indexes from 1961 to 1962 were as follows: Eastern Unit down 3 percent, Central Unit down 11.5 percent, and Western Unit down 12 percent. For the United States as a whole, the 1962 breeding population index is down 10 percent from 1961.

INTRODUCTION

Prior to 1960, the annual status of the mourning dove population was reported in the Mourning Dove Newsletter. The Newsletter continues as a report on activities in mourning dove research and management on a national scale, but the annual report on status of the population, used chiefly for regulatory purposes, is published separately. The 1960 and 1961 Status Reports were published in the Special Scientific Report - Wildlife Series Nos. 49 and 57.

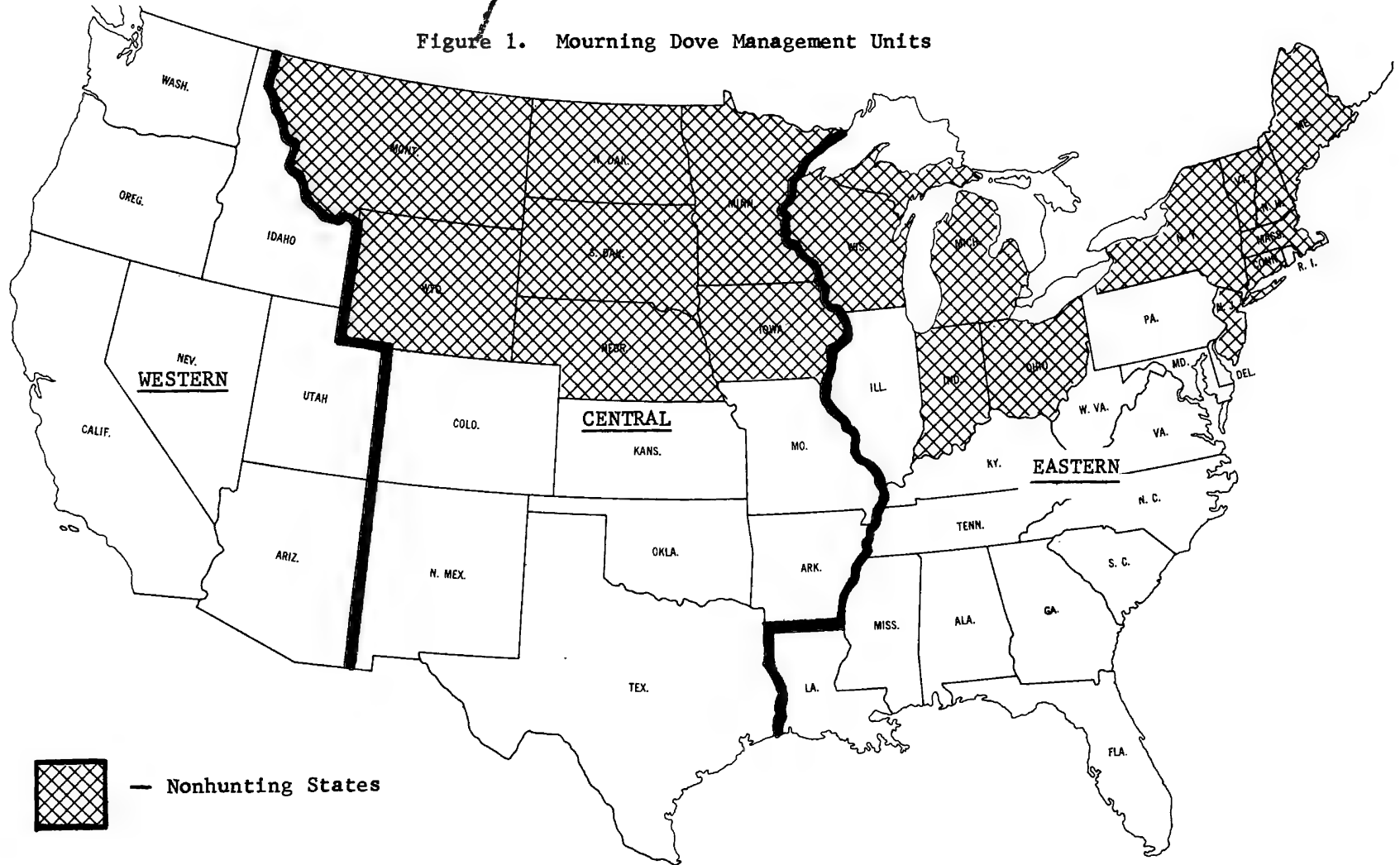
An annual survey of the breeding population of mourning doves by a system of call-count routes provides an index to the status of the population in the United States. Through the cooperation of State, Bureau, and independent observers, call-count routes were widely established by 1953. The hundreds of cooperators who participate in the call-count survey have contributed the data that form the basis for this report.

The call-count survey period is May 20 - June 10, a period during which dove calling activity is relatively stable, as indicated by intensive studies in eastern United States (Special Scientific Report - Wildlife No. 17). Because hunting regulations must be published 30 days prior to the hunting season, the Dove Regulations Committee can meet no later than in late June. Status statistics must be summarized for consideration by this Committee. The annual Status Report (or a preliminary version thereof) serves this purpose. It also is distributed to all cooperators in the call-count survey and is available to interested organizations and individuals.

For several years prior to 1960, the Federal framework of mourning dove hunting regulations was established on the basis of eastern and western groups of States. Recent analysis of banding data indicates that there are three units of the mourning dove population in the United States that are largely independent of each other (Kiel, 1959) and the Federal framework of hunting regulations was established on the basis of these three management units in 1960. The criteria for independence are that a unit produces the bulk of the doves that it harvests and does not produce a significant number of doves that are harvested by other units. The Eastern, Central, and Western Management Units outlined in figure 1 best meet

these criteria for management units on the basis of present information. Additional analysis of banding data is currently in progress to more firmly establish the Management Unit boundaries.

Figure 1. Mourning Dove Management Units



PROCEDURE

The Call-count Method

Call-count routes were established after field investigations in 1950-51 demonstrated the feasibility of the technique. These investigations were reported by Foote, Peters, McGowan, Kerley, Duvall, Robbins, and Wagner (1952). Doves heard calling and doves seen are recorded on a route 20 miles in length with listening stations one mile apart. Call counts begin one-half hour before sunrise and continue for two hours. Information on the call-count method and procedures for randomly selecting call-count routes was presented by Foote, Peters, and Finkner (1958).

The call-count survey provides the only population index for doves currently available on a national and international scale. It has limitations and possible biases that require consideration and evaluation through further study. It is an index to the breeding population only and does not indicate production. This is an important limitation because a high percentage of an average fall population is composed of young of the year. In calculating trends in the breeding population, doves heard calling has been a less variable index than doves seen. Additional research is needed to understand the relationship of doves heard calling and doves seen to the actual population in various portions of the mourning dove breeding range. Several Cooperative Wildlife Research Units and State and Bureau Personnel are conducting studies of the call-count census method this year.

Weighting Factors

When combining data from several States to obtain breeding population indexes for management units or parts of management units, it was necessary to give appropriate weight to the data from each State. This was done by multiplying the average doves heard calling per route in each State by the estimated area of dove habitat in the State to obtain a breeding population index value. These index values for each State were then added together to obtain the properly weighted breeding population index for the combination of States. This weighting procedure recognizes differences between States both in dove density and the amount of habitat. Dove habitat area was estimated in the 1958 Mourning Dove Newsletter and is listed in table 1.

Long-term Trends

For the purpose of showing long-term trends in the breeding population index of a State, a base year was selected, and annual percentage changes have been applied to the base figure (average doves heard calling per route) to give an adjusted figure which shows the true relation of indexes from year-to-year. The selection of a base figure is necessary because not all routes are censused each year. From a base year, average doves heard calling per route for each State has been adjusted annually according to the percentage change from the preceding year in counts on routes covered both years. For example, 1957 was selected as a base year in Alabama (table 2). In that year, the average doves heard calling per route was 21.1. In 1958, the percentage change from 1957 in counts on comparable routes was an increase of 12.8 percent, so the base figure of 21.1 was adjusted upward by 12.8 percent to a level of 23.8. In 1959, the percentage change from 1958 in counts on comparable routes was a decrease of 21.6 percent, so the 1958 adjusted figure or adjusted base was decreased by 21.6 percent, from 23.8 to 18.7.

TRENDS IN THE BREEDING POPULATION INDEX - 1962

Eastern Management Unit

The breeding population index for the Eastern Unit decreased 3 percent from the 1961 level (table 1). Figure 2 shows that the breeding index of the Eastern Unit increased generally over the 7-year period prior to 1961, followed by a 2-year decline.

In hunting States of the Eastern Unit, the breeding index remained unchanged from 1961. In nonhunting States, the index decreased 12 percent from 1961 to 1962 (table 1). The long-term trend of the breeding index in nonhunting States of the Eastern Unit is shown in figure 3 and indicates a relatively stable population in recent years.

Central Management Unit

The breeding population index for the Central Unit decreased 11.5 percent from the 1961 level (table 1). Figure 2 shows that for 6 years up to 1960 the breeding index of the Central Unit generally increased. This has been followed by declines in 1961 and 1962.

Figure 2. Trends in Breeding-population Indexes
by Management Units, 1953-1962

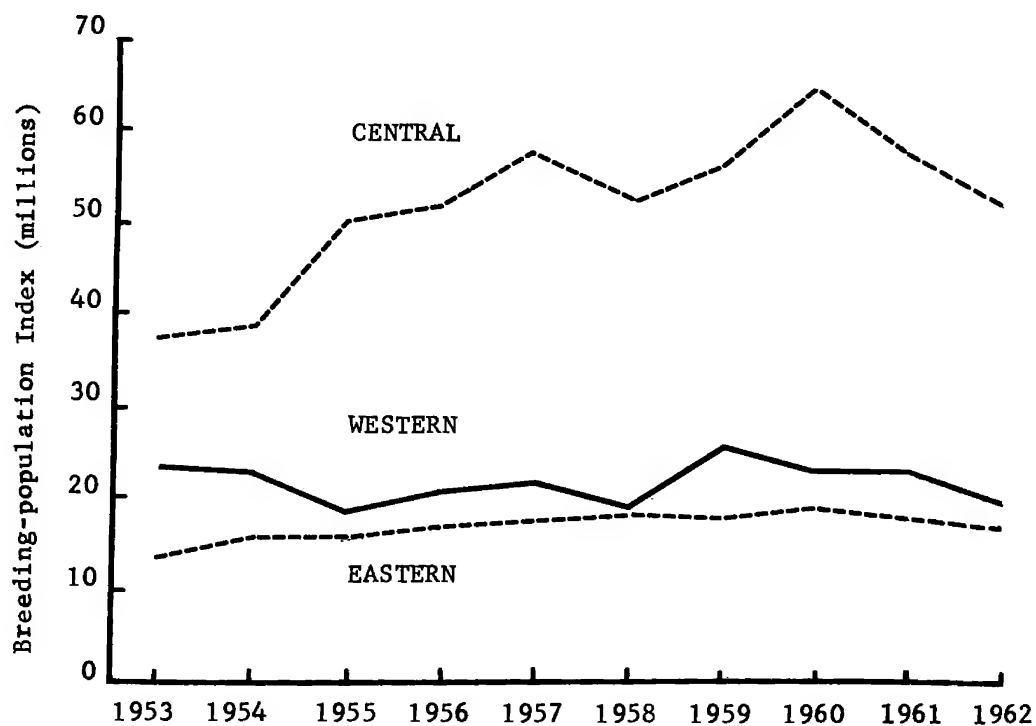
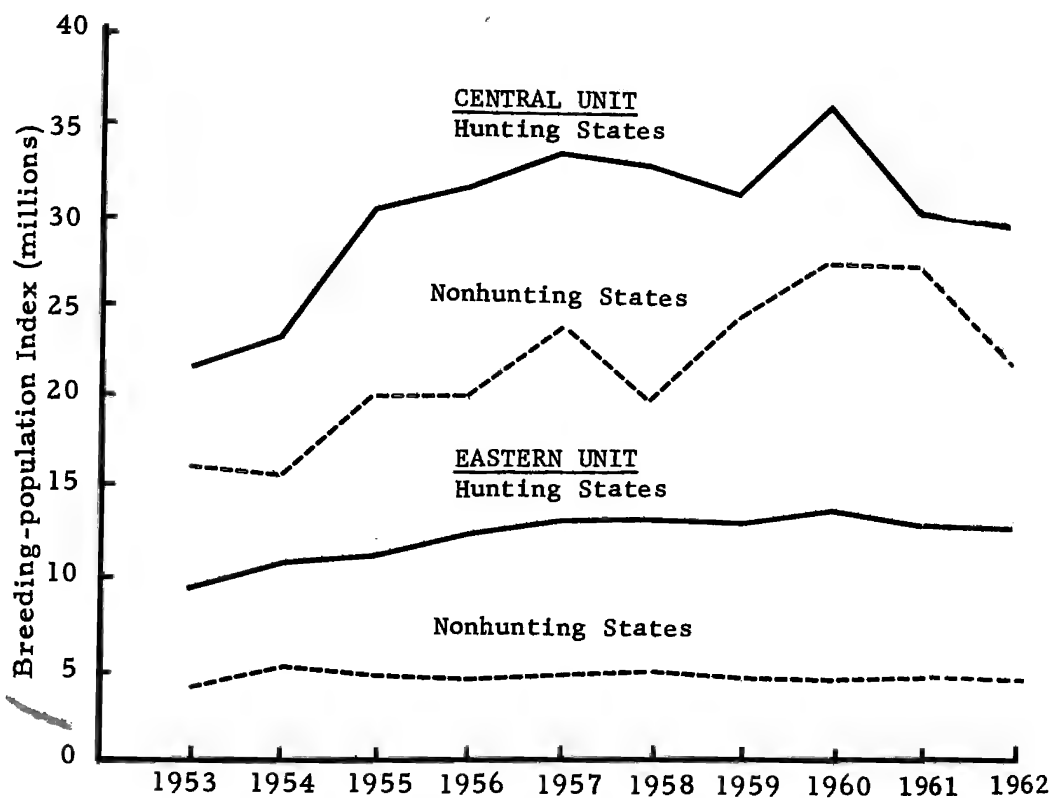


Figure 3. A Comparison of Trends in Breeding-population Indexes for Hunting and Nonhunting States within Management Units.



In hunting States of the Central Unit, the breeding index decreased 4 percent compared to 1961. The State of Texas had two routes that were not considered in the 1962 data because they so heavily weighted the data for Texas that the State index was altered -22.6 percent (from +4.3 to -18.3 percent change). This in turn altered the entire Central Management Unit data (from -11.5 to -15.8 percent change).

In nonhunting States, the index declined 20 percent between 1961 and 1962 (table 1). Adverse weather was reported as occurring during the census period in the north central area of this management unit in 1962. To test the influence that unseasonable weather had on these counts, the records of weather conditions taken at the time of beginning of the routes was compared for the years 1961 and 1962 in the States of Iowa, Minnesota, Nebraska, South Dakota, and North Dakota. Average temperature, percent cloudiness, and the Beaufort wind scale were measurements used. No clear-cut weather differences were noted between years except greater cloudiness occurred in 1962 reflecting the reported stormy conditions. Cloudiness, by itself has not proven to be a cause of decreased calling intensity.

Western Management Unit

The breeding population index for the Western Unit showed a 12 percent decrease from the 1961 level (table 1). Figure 2 shows that the breeding index of the Western Unit has fluctuated moderately over the 10-year period at generally stable levels.

Discussion of Population-index Trends

Indexes to mourning dove breeding populations in the three management units showed declines from the 1961 level. For the United States as a whole, the 1962 breeding population index was 10 percent below the 1961 level. The long-term trend has been generally upward since 1953 to 1960 and has decreased in 1961 and 1962. The breeding population index level in the Eastern and Central Units remain above the 1953 levels and in the Western Unit the index fluctuated above and below its present level since 1953.

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Table 1. Trends in Doves Heard Calling on Call-count Routes, 1961 to 1962

EASTERN MANAGEMENT UNIT - HUNTING STATES

State	Est. Dove Habitat (sq. mi.)	Compa- rable Routes	Average Heard per Route and Indexes *				Percent Change
			1961		1962		
			Heard	Index	Heard	Index	
Ala.	51,078	27	20.1	1,027	19.5	996	- 3.0
Del.	1,978	1	36.0	71	44.0	87	+ 22.5
Fla.	54,262	22	12.0	651	14.5	787	+ 20.9
Ga.	58,518	19	20.4	1,194	23.8	1,393	+ 16.7
Ill.	55,947	32	36.0	2,014	29.3	1,639	- 18.6
Ky.	40,109	17	26.7	1,071	27.1	1,086	+ 1.4
La.	45,177	27	13.7	619	10.9	492	- 20.5
Md.	9,393	12	17.2	162	19.0	178	+ 9.9
Miss.	47,420	22	22.7	1,076	24.2	1,148	+ 6.7
N. C.	44,232	21	23.7	1,048	26.1	1,154	+ 10.1
Pa.	23,465	12	13.2	310	10.9	256	- 17.4
R. I.	**	2	10.0	**	11.0	**	--
S. C.	30,594	20	31.7	970	28.5	872	- 10.1
Tenn.	41,961	24	22.9	961	26.4	1,108	+ 15.3
Va.	37,904	10	40.6	1,539	35.1	1,330	- 13.6
W. Va.	16,863	3	11.4	192	23.9	403	+109.9
Sub- total	558,901	271		12,905		12,929	+ 0.2

EASTERN MANAGEMENT UNIT - NONHUNTING STATES

Conn.	3,919	2	5.2	20	5.2	20	0.0
Ind.	36,205	11	30.2	1,093	25.0	905	- 17.2
Maine	**	3	3.0	**	3.0	**	--
Mass.	1,977	23	5.0	10	6.7	13	+ 30.0
Mich.	28,511	9	28.8	821	22.9	653	- 20.5
N. H.	**	4	3.8	**	2.8	**	--
N. J.	7,522	8	16.3	123	16.2	122	- 0.8
N. Y.	11,982	8	23.5	282	27.1	325	+ 15.3
Ohio	41,122	15	21.6	888	25.8	1,060	+ 19.4
Vt.	**	1	0.0	**	2.0	**	--
Wisc.	38,300	17	35.7	1,367	25.0	958	- 30.1
Sub- total	169,538	101		4,604		4,056	- 11.6

Eastern Unit

Total	728,439	372		17,509		16,985	- 3.0
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Trends in Doves Heard Calling on Call-count Routes, 1961 to 1962 (cont'd)

CENTRAL MANAGEMENT UNIT - HUNTING STATES

			<u>Average Heard per Route and Indexes *</u>				
	Est. Dove Habitat (sq. mi.)	Compa- rable Routes	<u>1961</u>		<u>1962</u>		Percent Change
			<u>Heard</u>	<u>Index</u>	<u>Heard</u>	<u>Index</u>	
Ark.	52,725	9	30.5	1,608	16.9	891	- 44.6
Colo.	72,777	8	16.8	1,223	16.8	1,223	0.0
Kans.	92,113	33	62.7	5,775	63.8	5,877	+ 1.8
Mo.	69,270	17	44.6	3,089	42.1	2,916	- 5.6
N. Mex.	109,360	12	37.4	4,090	32.8	3,587	- 12.3
Okla.	69,283	9	46.0	3,187	40.2	2,785	- 12.6
Texas	263,644	36	41.5	10,941	43.3	11,416	+ 4.3
total	729,172	124		29,913		28,695	- 4.1

CENTRAL MANAGEMENT UNIT - NONHUNTING STATES

Iowa	55,986	14	82.5	4,619	80.0	4,479	- 3.0
Minn.	60,007	13	30.1	1,806	24.9	1,494	- 17.3
Mont.	124,369	15	66.5	8,271	44.0	5,472	- 33.8
Nebr.	76,653	10	66.3	5,082	52.3	4,009	- 21.1
N. Dak.	70,054	23	36.9	2,585	33.2	2,326	- 10.0
S. Dak.	73,475	7	35.5	2,608	27.4	2,013	- 22.8
Wyo.	82,080	16	28.3	2,323	26.0	2,134	- 8.1
total	542,624	98		27,294		21,927	- 19.7
Central Unit Total	1,271,796	222		57,207		50,622	- 11.5

Table 1. Trends in Doves Heard Calling on Call-count Routes, 1961 to 1962 (cont.)

WESTERN MANAGEMENT UNIT - HUNTING STATES

State	Est. Dove Habitat (sq. mi.)	Compa- rable Routes	Average Heard per Route and Indexes *				Percent Change
			1961		1962		
			Heard	Index	Heard	Index	
Ariz.	113,580	19	47.1	5,350	32.8	3,725	- 30.4
Calif.	141,123	55	42.7	6,026	48.0	6,774	+ 12.4
Idaho	49,685	11	27.2	1,351	27.6	1,371	+ 1.5
Nev.	108,704	24	29.6	3,218	14.9	1,620	- 49.7
Oreg.	72,263	18	43.0	3,107	36.8	2,659	- 14.4
Utah	74,111	13	28.0	2,075	25.7	1,904	- 8.2
Wash.	46,884	13	31.0	1,453	36.9	1,730	+ 19.1
Western Unit							
Total	606,350	153		22,580		19,783	- 12.4
U.S. Total							
	2,606,585	749		97,296		87,390	- 10.2

* From a base year, average doves heard calling per route for each State has been adjusted annually according to the percentage change from the preceding year in counts on comparable routes. The index, expressed in thousands, is the product of the adjusted average doves heard per route and the estimated area of dove habitat.

** The area of dove habitat has not been estimated for Maine, New Hampshire, Rhode Island, and Vermont.

Table 2. Trends in the Breeding-population Index, 1953-62

The first figure listed for each State by years is the adjusted average doves heard calling per route. The method of adjustment is described in the text. The base year for adjustments was 1956 or 1957. States for which 1957 was the base year are those that reorganized call-count routes in that year. These States are Alabama, Georgia, Kentucky, Mississippi, North Carolina, South Carolina, and Tennessee.

The second figure for each State is the breeding-population index. The index, expressed in thousands, is the product of the adjusted average doves heard per route and the estimated area of dove habitat. (Habitat area is given in table 1.)

State	1953	1954	1955	1956	1957	1958	1959	1960	1961	1962
Ala.	17.4 889	21.3 1,088	19.7 1,006	19.9 1,016	21.1 1,078	23.8 1,216	18.7 955	22.7 1,159	20.1 1,027	19.5 996
Ariz.	30.7 3,487	31.8 3,612	29.4 3,339	40.0 4,543	33.1 3,759	31.0 3,521	33.6 3,816	26.3 2,987	47.1 5,350	32.8 3,725
Ark.	34.6 1,824	27.1 1,429	32.0 1,687	29.4 1,550	32.6 1,719	33.7 1,777	30.0 1,582	28.0 1,476	30.5 1,608	16.9 891
Calif.	37.8 5,334	34.7 4,897	30.0 4,234	34.9 4,925	36.7 5,179	41.2 5,814	55.1 7,776	59.5 8,397	42.7 6,026	48.0 6,774
Colo.	no index	46.5 3,384	50.2 3,653	70.5 5,131	57.6 4,192	46.4 3,377	23.8 1,732	34.9 2,540	16.8 1,223	16.8 1,223
Conn.	5.0 20	0.0 0	5.6 22	5.5 22	9.0 35	7.0 27	6.0 24	9.6 38	5.2 20	5.2 20
Dela.	28.0 55	29.0 57	30.0 59	33.0 65	31.0 61	30.0 59	54.0 107	49.0 97	36.0 71	44.0 87
Fla.	18.2 988	15.2 825	16.7 906	14.6 792	13.8 749	11.0 597	11.0 597	12.9 700	12.0 651	14.5 787
Ga.	17.2 1,007	17.3 1,012	15.5 907	22.5 1,317	21.4 1,252	15.9 930	18.9 1,106	24.0 1,404	20.4 1,194	23.8 1,393
Idaho	22.8 1,133	30.0 1,491	26.3 1,307	26.8 1,332	27.0 1,341	23.8 1,183	26.7 1,327	30.8 1,530	27.2 1,351	27.6 1,371

Table 2. Trends in the Breeding-population Index, 1953-62 (cont'd)

State	1953	1954	1955	1956	1957	1958	1959	1960	1961	1962
Ill.	23.7 1,326	19.4 1,085	19.7 1,102	22.8 1,276	30.3 1,695	32.8 1,835	33.2 1,857	31.6 1,768	36.0 2,014	29.3 1,639
Ind.	23.5 851	42.4 1,535	35.7 1,293	29.3 1,061	32.8 1,188	34.0 1,231	35.4 1,282	26.8 970	30.2 1,093	25.0 905
Iowa	28.2 1,579	32.9 1,842	41.5 2,323	44.1 2,469	57.6 3,225	50.6 2,833	82.6 4,624	66.0 3,695	82.5 4,619	80.0 4,479
Kan.	29.3 2,699	27.7 2,552	40.6 3,740	43.4 3,998	42.9 3,952	42.9 3,952	50.2 4,624	61.7 5,683	62.7 5,775	63.8 5,877
Ky.	14.4 578	17.9 718	18.9 758	23.0 923	22.3 894	27.8 1,115	27.4 1,099	28.3 1,135	26.7 1,071	27.1 1,086
La.	23.0 1,039	24.7 1,116	27.4 1,238	25.2 1,138	17.0 768	15.9 718	13.8 623	14.8 669	13.7 619	10.9 492
Maine**							1.5	2.5	3.0	3.0
Md.	10.1 95	22.2 209	15.9 149	18.6 175	17.8 167	17.0 160	19.7 185	17.0 160	15.7 147	19.0 178
Mass.	3.7 7	6.0 12	2.0 4	1.0 2	8.3 16	3.7 7	5.3 10	7.6 15	5.0 10	6.7 13
Mich.	13.0 371	16.6 473	21.9 624	20.6 587	22.1 630	24.8 707	30.1 858	27.2 775	28.8 821	22.9 653
Minn.	30.9 1,854	36.3 2,178	39.6 2,376	37.6 2,256	33.1 1,986	28.9 1,734	24.1 1,446	23.4 1,404	30.1 1,806	24.9 1,494
Miss.	15.7 744	18.3 868	20.5 972	21.2 1,005	26.0 1,233	31.7 1,503	25.8 1,223	25.9 1,228	22.7 1,076	24.8 1,148
Mo.	26.8 1,856	29.3 2,030	42.5 2,944	50.6 3,505	61.0 4,225	52.7 3,651	46.4 3,214	49.5 3,429	44.6 3,089	42.1 2,916
Mont.	24.8 3,084	18.8 2,338	37.9 4,714	41.8 5,199	36.8 4,577	38.2 4,751	39.0 4,850	77.3 9,614	66.5 8,271	44.0 5,472
Neb.	82.6 6,332	62.5 4,791	55.3 4,239	43.8 3,357	53.6 4,109	35.1 2,691	73.4 5,626	81.8 6,270	66.3 5,082	52.3 4,009

Table 2. Trends in the Breeding-population Index, 1953-62 (cont'd)

State	1953	1954	1955	1956	1957	1958	1959	1960	1961	1962
Nev.	26.2 2,848	27.5 2,989	28.4 3,087	27.2 2,957	28.0 3,044	18.1 1,968	33.2 3,609	24.1 2,620	29.6 3,218	14.9 1,620
N.H.**							3.0	4.7	3.8	2.8
N.J.	9.7 73	16.6 125	11.4 86	11.8 89	14.0 105	15.7 118	18.3 138	18.3 138	16.3 123	16.2 122
N.Mex.	28.7 3,139	25.8 2,821	42.8 4,681	31.7 3,467	23.0 2,515	24.5 2,679	32.0 3,500	55.6 6,080	37.4 4,090	32.8 3,587
N.Y.	22.9 274	19.3 231	20.0 240	31.8 381	30.2 362	25.0 300	18.7 224	28.6 343	23.5 282	27.1 325
N.Car.	15.3 677	21.2 938	23.8 1,053	23.9 1,057	24.4 1,079	22.6 1,000	27.9 1,234	27.0 1,194	23.7 1,048	26.1 1,154
N.Dak.	9.8 687	17.1 1,198	18.0 1,261	21.6 1,513	24.7 1,730	30.3 2,123	33.1 2,319	35.0 2,452	36.9 2,585	33.2 2,326
Ohio	22.0 905	27.2 1,119	22.2 913	18.2 748	20.2 831	24.3 999	20.3 835	17.8 732	21.6 888	25.8 1,060
Okla.	13.4 928	23.0 1,594	32.1 2,224	42.1 2,917	51.0 3,533	55.8 3,866	55.2 3,824	45.1 3,125	46.0 3,187	40.2 2,785
Ore.	38.6 2,789	24.5 1,770	30.8 2,226	29.8 2,153	33.8 2,442	28.8 2,081	42.3 3,057	38.8 2,804	43.0 3,107	36.8 2,659
Penna.	9.5 223	13.7 321	11.8 277	13.2 310	15.0 352	13.1 307	14.3 336	12.7 298	13.2 310	10.9 256
R.I.**							14.0	8.0	10.0	11.0
S.Car.	18.9 578	31.2 955	29.6 906	29.6 906	30.0 918	31.6 967	30.2 924	32.0 979	31.7 970	28.5 872
S.Dak.	29.2 2,145	38.1 2,799	60.4 4,438	50.1 3,681	74.3 5,459	51.8 3,806	47.0 3,453	29.4 2,160	35.5 2,608	27.4 2,013
Tenn.	15.2 638	19.4 814	24.7 1,036	25.1 1,053	34.9 1,464	31.7 1,330	26.6 1,116	27.0 1,133	22.9 961	26.4 1,108

Table 2. Trends in the Breeding-population Index, 1953-62 (cont'd)

State	1953	1954	1955	1956	1957	1958	1959	1960	1961	1962
Texas	29.7 7,830	35.7 9,412	43.1 11,363	41.2 10,862	50.9 13,419	50.3 13,261	48.7 12,839	51.1 13,472	41.5 10,941	43.3 11,416
Utah	no index	88.3 6,544	42.4 3,142	38.0 2,816	43.5 3,224	28.6 2,120	43.5 3,224	35.2 2,609	28.0 2,075	25.7 1,904
Vt.**							1.0	8.0	0.0	2.0
Va.	13.2 500	16.0 606	18.2 690	22.2 841	32.2 1,221	40.6 1,539	43.2 1,637	43.2 1,637	40.6 1,539	35.1 1,330
Wash.	28.9 1,355	29.0 1,360	32.9 1,542	32.6 1,528	48.4 2,269	42.4 1,988	51.3 2,405	35.3 1,655	31.0 1,453	36.9 1,730
W.Va.	8.6 145	8.6 145	7.0 118	16.0 270	7.7 130	3.4 57	4.2 71	10.9 184	11.4 192	23.8 408
Wisc.	36.8 1,409	39.7 1,521	42.4 1,624	44.2 1,693	37.9 1,452	34.3 1,314	31.6 1,210	36.0 1,379	35.7 1,367	25.0 958
Wyo.	no index	5.6 460	7.5 616	18.1 1,486	30.9 2,536	22.7 1,863	26.4 2,167	24.1 1,978	28.3 2,323	26.0 2,134
TOTAL INDEX *	77,262	85,119	88,372	96,118	89,074	98,665	104,115	97,281	87,392	
PERCENTAGE CHANGE		+3.6	+10.2	+3.8	+8.8	-7.3	+10.8	+5.9	-6.6	-10.2

* The 1953 index is incomplete because Colorado, Utah, and Wyoming did not conduct call-count surveys until 1954. The percentage change from 1953 to 1954 is based on comparable data only.

** Maine, New Hampshire, Rhode Island, and Vermont first established call-count routes in 1959. No estimate has been made of the square miles of dove habitat in these States.

Table 3. Summary of Call-count Routes by States.

Includes all routes run in 1962 but only comparable routes for 1961.

ALABAMA

Rt. No.	County	Heard		Seen		Rt. No.	County	Heard		Seen	
		1961	1962	1961	1962			1961	1962	1961	1962
5R	Madison	44	38	33	17	69R	Perry-				
8R	Colbert-					Hale		39	60	47	65
	Franklin	3	3	11	11	75R	Lee-Macon	18	24	25	6
20R	Morgan-					76R	Lee	22	23	2	2
	Marshall	40	37	32	14	77R	Choctaw	12	3	6	3
22R	Cherokee-					81R	Dallas	12	3	12	7
	Etowah	49	50	102	33	89R	Wilcox	9	9	6	12
23R	Cherokee-					90R	Wilcox-				
	DeKalb	46	45	22	37	Butler		9	18	9	3
29R	Etowah	37	25	4	4	96R	Choctaw-				
34R	Walker	38	29	24	12	Washington		2	7	0	4
35R	Jefferson	18	22	10	8	99R	Monroe	4	7	4	16
41R	Pickens	--	6	--	19	103R	Pike-				
43R	Jefferson	22	18	6	4	Coffee-					
47R	Claburne-					Barbour		15	9	10	38
	Randolph	25	2	17	14	105R	Barbour-				
52R	Shelby-					Henry		32	27	21	8
	Bibb	4	11	1	0	107R	Clarke	30	7	27	2
59R	Hale-					116R	Washington-				
	Perry	10	22	11	15	Mobile		7	5	9	1
63R	Coosa-					121R	Covington	12	6	6	5
	Elmore	3	6	1	7						

ARIZONA

3	Mohave	12	5	1	0	155	Cochise	4	7	0	9
7	Mohave	25	13	0	41	157	Mohave	2	5	9	5
9A	Mohave	46	27	4	3	170	Cochise	9	28	4	8
14	Mohave	37	13	4	0	187	Apache	23	5	0	1
15	Mohave	15	11	1	1	206	Coconino-				
22	Mohave	5	4	1	4	Navajo		--	13	--	1
44	Maricopa	14	13	9	8	253	Apache	--	24	--	1
51	Maricopa	11	18	0	27	260	Coconino	48	1	23	1
56	Navajo	13	14	5	2	323	Apache	24	33	7	1
78	Apache	10	0	5	0	550	Yuma	45	32	9	7
79	Apache	36	0	12	6	560	Yuma	68	40	79	29
137	Cochise	4	0	44	6	563	Yuma	--	99	--	62
154	Cochise	8	41	26	12	601	Maricopa	47	32	12	30

ARIZONA - Continued --

Rt. No.	County	Heard		Seen		Rt. No.	County	Heard		Seen	
		1961	1962	1961	1962			1961	1962	1961	1962
615	Pinal	9	8	1	8	626	Pima	17	10	1	0
620	Pima	41	16	1	4	632	Pima	15	12	3	7

ARKANSAS

1	Arkansas	91	40	154	125	7	Poinsett	--	24	--	48
2	Arkansas	83	19	118	22	8	Montgomery	6	4	2	3
3	Craighead	--	18	--	50	9	Scott	9	4	14	0
4	Craighead	--	31	--	46	10	Marion	14	23	22	15
5	Ouachita	14	5	45	2	11	Madison	15	22	17	9
6	Ouachita	11	13	44	2	12	Van Buren	12	11	15	21

CALIFORNIA

1R	Del Norte	0	0	0	0	24R	Napa	64	70	13	22
2R	Siskiyou	26	34	125	35	25R	Placer	0	0	0	0
3R	Humbolt	1	0	3	2	26R	Napa-				
4R	Trinity	4	3	3	13		Solano	22	13	46	36
5R	Trinity	0	1	0	6	27R	Alpine	4	3	0	5
6R	Humbolt	0	4	7	9	28R	Contra				
7R	Shasta	0	27	0	1		Costa	13	16	22	17
8R	Humbolt	0	1	3	3	29R	San				
9R	Shasta	2	3	0	5		Joaquin	2	16	14	13
10R	Lassen	13	26	25	39	30R	Tuolumne	1	2	0	0
11R	Mendocino	14	1	7	5	31R	Tuolumne	57	49	14	6
12R	Tehama-					33R	Merced-				
	Butte	57	59	115	59		Sanislaus	37	32	32	62
13R	Lassen	8	13	0	0	35R	Merced	10	8	32	36
14R	Butte	17	23	16	3	36R	Mono	12	22	0	2
15R	Butte-					37R	Hollister	28	6	7	6
	Plumas	1	0	0	0	38R	Madera	29	44	14	23
16R	Plumas	18	2	28	30	40R	San Benito-				
17R	Mendocino	10	7	8	12		Fresno	49	44	8	6
18R	Plumas	13	3	1	4	41R	Fresno	31	38	55	87
19R	Lake	45	35	9	4	43R	Monterey-				
20R	Sierra	0	0	0	0		San Benito	7	10	23	26
21R	Colusa-					44R	Fresno-				
	Yolo	19	24	72	55		Tulare	62	66	153	172
22R	Colusa-					45R	Monterey-				
	Sutter	24	13	27	21		San Luis				
23R	Nevada	9	9	11	0		Obispo	76	89	84	104

CALIFORNIA - Continued --

Rt. No.	County	Heard		Seen	
		1961	1962	1961	1962
46R	Kings	33	34	91	62
47R	Tulare	7	17	38	39
48R	Tulare	46	30	32	17
49R	Tulare	88	70	24	75
50R	San Luis Obispo-				
	Santa Barbara	100	218	26	21
51R	San Luis Obispo-				
	Kern	19	30	8	11
52R	Kern	19	59	1	7

Rt. No.	County	Heard		Seen	
		1961	1962	1961	1962
53R	San Bernardino	0	3	0	3
54R	Ventura-				
	Los Angeles	27	11	72	54
55R	San Bernardino	2	0	5	0
57R	San Diego-				
	Riverside	17	25	42	62
58R	Riverside	28	18	188	157
59R	Imperial	35	33	232	128
61R	Imperial	28	21	124	125

COLORADO

7	Adams	13	6	19	14
9	Arapahoe	23	21	27	13
10	Weld	14	9	35	23
11	Moffat	9	9	8	2
12	Douglas	19	29	6	17
16	Phillips	18	11	13	11

17	Yuma-				
	Washington	0	2	1	2
18	Yuma	4	13	17	15
19	Garfield	--	13	--	27
20	Mesa	--	36	--	100
21	Montrose	--	49	--	92

CONNECTICUT

2	New London	4	1	5	0
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3	New Haven	3	6	5	0
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DELAWARE

1	Kent	36	44	2	5
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FLORIDA

1R	Santa Rosa	14	27	5	17
2R	Okaloosa	27	21	5	3
3R	Walton	6	5	0	3
4R	Franklin	1	2	0	0

5R	Clay	8	8	0	11
6R	St. Johns	26	41	11	7
7R	Putnam	10	27	12	12
8R	St. Johns	22	25	28	0

FLORIDA - Continued --

Rt. No.	County	Heard		Seen		Rt. No.	County	Heard		Seen	
		1961	1962	1961	1962			1961	1962	1961	1962
9R	Gilchrist	14	22	8	8	15R	Osceola	5	1	2	1
10R	Alachua-					16R	Osceola	49	7	14	7
	Marion	19	30	2	8	17R	Hillsborough	5	6	3	2
11R	Volusia	13	15	0	0	18R	Okeechobee	4	16	0	6
12R	Sumter-					19R	Okeechobee	21	41	7	3
	Marion	15	17	5	7	20R	Okeechobee	24	18	6	5
13R	Lake	20	31	1	7	21R	Glades	2	9	20	0
14R	Orange	3	2	4	1	23R	Collier	0	0	0	0

GEORGIA

10R	Gilmer-					38R	Heard	7	12	12	19
	Pickens	9	11	3	0	47R	Troup-				
16R	Gordon-						Chambers	8	10	11	2
	Bartow	23	29	9	2	60R	Upson	15	12	10	9
18R	Dawson-					67R	Screven-				
	Forsyth	12	9	7	1		Jenkins	23	55	3	11
25R	Cobb-					79R	Chattahoochee-				
	Cherokee	7	3	9	6		Stewart	9	10	0	0
27R	Gwinnett-					85R	Laurens-				
	Barrow	13	24	12	4		Wheeler	17	22	23	13
28R	Jackson-					90R	Effingham	25	58	8	25
	Barrow	--	22	--	6	105R	Worth-				
29R	Madison-						Turner	29	20	36	35
	Oglethorpe	58	39	34	10	111R	Wayne	22	15	5	19
31R	Haralson-					118R	Irwin-				
	Carroll	9	6	18	16		Berrien	19	18	21	44
33R	Walton	--	13	--	17	121R	Pierce	34	43	10	6
34R	Oconee	--	14	--	5	140R	Lowndes	6	7	2	2

IDAHO

1	Bingham	15	28	27	58	12	Adams-				
2	Power	55	43	19	289		Washington	21	28	52	27
3	Bannock	40	25	13	14	16	Canyon	44	43	38	61
4	Caribou	--	20	--	0	18	Franklin	49	25	72	50
7	Nez Perce	26	32	32	34	22	Booner-				
8	Ada-Canyon	--	13	--	24		Kootenai	7	20	0	0
9	Ada-Canyon	25	23	63	51	24	Gem-				
11	Nez Perce	40	55	17	35		Payette	115	119	117	134

ILLINOIS

Rt. No.	County	Heard		Seen	
		1961	1962	1961	1962
1	Cook-				
	Lake	34	18	10	8
2	Lake	32	15	14	15
3	Williamson	52	66	38	32
4	Williamson-				
	Jackson	61	59	11	23
5	Ogle	20	5	8	8
6	Ogle	19	18	3	13
7	Hancock	41	52	19	21
8	Marshall-				
	Putnam	4	12	2	1
9	Fulton-				
	McDonough	96	98	16	14
10	Union	35	20	37	24
11	Macon	3	5	10	5
12	Ogle	26	21	5	13
13	Washington	67	60	83	62
14	Lawrence	71	46	43	38
15	Champaign	19	11	3	10
16	Whiteside	8	15	18	7

Rt. No.	County	Heard		Seen	
		1961	1962	1961	1962
17	Madison	35	25	35	35
18	Madison-				
	Jersey	48	34	49	38
19	DeKalb	6	2	12	1
20	Mason	54	51	25	30
21	Mason	81	52	10	24
22	St.Clair	10	4	14	18
23	St.Clair	7	8	21	31
24	St.Clair-				
	Monroe	30	9	25	15
25	Lee	14	6	21	37
26	Lee	14	20	7	22
27	St.Clair	27	32	58	58
30	Winnebago	35	19	13	8
31	Winnebago	47	22	19	9
32	St.Clair-				
	Madison	30	27	9	34
33	Tazewell	33	26	10	8
34	Knox	49	43	30	42

INDIANA

9	Jackson	22	20	13	31
10	Newton	33	23	22	28
12	Wayne	56	38	24	13
13	Fulton	19	18	13	31
14	Grant	9	17	15	11
16	Orange	40	74	29	65

17	Morgan	15	22	19	13
18	Boone	22	19	7	48
19	Whitley	55	22	3	5
21	Newton	96	46	27	26
22	LaGrange	22	23	9	8

IOWA

1	Clay	26	13	8	11
2	Clay				
	(North)	34	34	32	21
5	Boone	16	4	32	22
7	Emmet	24	69	18	10
8	Emmet	--	39	--	59
9	Polk-				
	Dallas	44	30	21	12

10	Mills-				
	Fremont	71	142	37	126
11	Lee	42	33	37	56
12	Bremer-				
	Fayette	23	28	12	16
13	Chickasaw-				
	Bremer	30	37	14	17
14	Clay	--	11	--	27

IOWA - Continued --

Rt. No.	County	Heard		Seen		Rt. No.	County	Heard		Seen	
		1961	1962	1961	1962			1961	1962	1961	1962
15	Linn	64	51	21	25	17	Kossuth	66	34	37	8
16	Clarke-					18	Franklin	22	13	26	11
	Decatur	135	128	113	114	21	Woodbury	61	23	79	73

KANSAS

1	Reno	81	86	152	101	20	Pratt	58	68	89	66
2	Sedgwick	102	108	110	33	21	Cherokee	88	83	155	80
3	Barton	50	48	89	53	22	Bourbon	107	51	191	90
4	Saline	86	95	122	37	25	Morton	12	14	30	31
5	Shawnee	143	47	83	15	27	Pottawatomie	92	99	128	100
6	Montgomery	33	24	73	57	28	Marion	29	37	100	63
7	Cloud	91	101	114	120	29	Clay	31	18	102	145
9	Lyons	51	78	78	43	30	Smith	54	212	53	204
10	Crawford	96	102	54	34	31	Hodgeman	79	67	15	15
11	Barber	97	65	138	43	32	Graham	--	129	--	40
12	Lynn	112	122	41	31	33	Ford	63	43	27	19
13	Franklin	125	92	65	92	34	Grant	6	12	11	7
14	Russell	46	62	73	39	35	Rawlins	59	68	46	20
15	Barton	65	30	49	55	36	Gove	--	46	--	91
16	Rush	35	52	85	91	37	Greenwood	28	26	50	85
17	Ness	36	50	25	32	39	Meade	55	58	69	102
18	Finney	38	16	40	8	40	Riley	32	50	27	46
19	Finney	78	110	144	32						

KENTUCKY

1R	Kenton-					53R	Lincoln-				
	Pendleton	20	19	11	13		Rockcastle	14	29	10	21
2R	Trimble-					60R	Ballard-				
	Henry	17	13	10	5		McCracken	21	18	42	57
17R	Breckinridge-					64R	Muhlenberg-				
	Meade	46	42	10	7		Logan	30	25	10	28
20R	Spencer-					79R	Christian	77	90	56	92
	Nelson	24	31	9	14	82R	Logan-				
23R	Bath-						Warren	23	36	17	16
	Montgomery	15	13	0	0	92R	Graves-				
25R	Lawrence-						Weekly	48	51	37	38
	Johnson	2	4	2	1	95R	Whitley-				
27R	Henderson	102	95	105	127		Campbell	4	9	0	0
41R	Floyd	1	2	0	0	96R	Bell	0	1	0	0
43R	Crittenden	24	13	33	32						

LOUISIANA

Rt. No.	County	Heard		Seen	
		1961	1962	1961	1962
1	Sabine-				
	Natchitoches	7	14	5	7
2	Webster-				
	Claiborne	11	11	9	11
3	Acadia	2	0	7	1
5	E.Baton Rouge-				
	Iberville	2	1	0	2
7	E. Feliciana	2	6	0	0
8	Tangipahoa	7	1	6	0
9	Concorida	24	19	10	10
10	Caldwell-				
	Ouachita	7	13	1	5
11	Rapides	4	5	3	4
12	Rapides	8	8	6	7
13	Vernon-				
	Natchitoches	10	7	1	1
14	Natchitoches	48	19	1	2
15	Lafayette	30	8	3	7

Rt. No.	County	Heard		Seen	
		1961	1962	1961	1962
16	Vermillion	2	0	0	0
17	Morehouse	33	22	8	2
18	Iberville	4	10	4	10
19	Terrebonne	5	6	5	9
20	Rapides	9	8	19	13
21	Rapides	19	13	31	11
24	Grant	32	20	36	17
25	Vernon	18	10	5	0
26	Lafayette-				
	St.Martin	19	31	12	34
27	Lafayette-				
	St.Martin	17	33	10	40
28	Bienville	36	17	13	18
29	Pointe-				
	Coupe	19	10	15	4
30	Union	9	9	8	8
31	Franklin	--	31	--	6
32	Vernon	10	12	0	1

MAINE

1	Kennebec-				
	Lincoln-				
	Sagadahoc	3	2	0	0

2	Sagadahoc-				
	Kennebec	1	3	0	0
5	York	5	4	1	0

MARYLAND

1R	Garrett	10	9	10	8
2R	Allegheny	8	13	5	4
3R	Frederick-				
	Carroll	11	19	14	13
4R	Howard	18	23	10	22
5R	Anne				
	Arundel	17	21	21	6
6R	Harford	7	20	20	18

7R	Baltimore-				
	Harford	16	12	0	10
8R	Anne				
	Arundel	13	13	7	2
9R	Calvert	25	40	11	7
10R	St.Marys	47	34	1	7
11R	Queen Annes	9	7	10	5
12R	Somerset-				
	Worcester	25	17	1	2

MASSACHUSETTS

Rt. No.	County	Heard		Seen		Rt. No.	County	Heard		Seen	
		1961	1962	1961	1962			1961	1962	1961	1962
1	Barnstable	2	13	0	2	13	Worcester	0	2	0	0
2	Barnstable	0	1	0	0	14	Worcester	0	0	1	0
3	Plymouth	10	8	3	1	16	Hampshire	10	11	7	7
4	Plymouth	8	9	2	0	17	Franklin	3	13	1	0
5	Bristol-					18	Franklin-				
	Plymouth	7	12	1	2		Hampshire	5	3	2	5
6	Bristol	4	2	0	1	19	Hampden	5	3	6	3
7	Norfolk	4	9	1	0	20	Hampshire	0	0	2	0
8	Essex	8	8	0	0	21	Hampshire	0	0	0	0
9	Middlesex	8	10	0	0	22	Berkshire	2	5	1	0
10	Worcester	4	0	11	6	23	Berkshire	1	0	0	0
11	Worcester	4	11	5	4	24	Essex	4	4	4	1
12	Worcester	2	0	0	0						

MICHIGAN

2	Washtenaw	19	28	17	12	11	Newaygo	21	19	10	11
3	Bay	22	11	2	4	12	Newaygo	27	15	9	11
4	Tuscola	18	15	5	3	13	Ingham	9	13	4	6
5	Tuscola	11	10	1	2	24	Allegan	64	29	21	50
6	Monroe	33	38	27	20						

MINNESOTA

1	Jackson	37	27	39	5	11	Ottertail	19	40	4	6
2	Jackson	47	34	11	11	12	Dodge	59	20	7	8
3	Nobles	--	51	--	75	14	Lincoln	80	88	29	35
6	Olmsted	20	26	17	55	15	Pope	43	24	13	14
7	Scott	40	36	21	31	16	Pennington	25	1	38	4
8	Polk-					17	Roseau	14	42	0	2
	Red Lake	14	23	12	37	18	Kandiyohi	74	29	25	21
10	Dakota	28	24	20	17						

MISSISSIPPI

7R	Tishomingo-					15R	Coahoma-				
	Alcorn	29	20	15	79		Bolivar	37	90	54	45
12R	Union	113	151	117	54	22R	Itawamba	42	18	52	76
13R	Prentiss-					25R	Tallahatchie	38	53	46	35
	Lee	44	33	56	56	28R	Chickasaw	47	22	40	12

MISSISSIPPI - Continued --

	County	Heard		Seen	
		1961	1962	1961	1962
33R	Sunflower-				
	LeFlore	37	41	38	23
35R	Montgomery	26	20	34	7
43R	Carroll-				
	Holmes	61	58	48	21
50R	Holmes-				
	Yazoo	66	36	50	22
56R	Sharkey-				
	Issaquena	26	47	26	70
60R	Leake	6	14	17	41

Rt. No.	County	Heard		Seen	
		1961	1962	1961	1962
73R	Rankin	12	10	50	47
74R	Smith	12	13	41	30
78R	Jefferson	7	5	5	16
89R	Lincoln	25	32	16	5
94R	Wayne	10	12	6	1
95R	Wayne	20	16	33	34
101R	Lamar-				
	Marion	9	20	24	7
113R	Hancock	4	3	0	0
115R	Jackson	0	0	0	2

MISSOURI

1	Boone	93	107	60	83
2	Boone-				
	Callaway	99	50	74	40
3	Callaway	37	42	39	59
4	Cole	51	28	36	23
5	Cape				
	Girardeau	67	75	56	110
6	Cape				
	Girardeau	54	71	41	116
7	Howell-				
	Douglas	33	34	3	0
8	Texas	18	23	3	4

9	Greene	12	23	18	30
11	St. Charles	36	30	26	28
13	DeKalb-				
	Daviess	85	52	49	37
14	Daviess-				
	Caldwell	44	46	97	47
17	Marion	51	68	61	55
18	Marion	25	26	52	43
19	Chariton	77	56	42	32
22	St. Charles	35	38	19	28
23	Greene	19	19	22	42

MONTANA

1	Yellowstone	23	10	9	45
2	Lewis-				
	Clark	11	13	1	5
8	Phillips	103	44	40	13
9	Phillips	194	100	39	9
10	Phillips	26	14	9	10
11	Sheridan	10	12	4	5
12	Sheridan	2	3	4	5
13	Sheridan-				
	Roosevelt	11	9	14	23

15	Revelli	0	0	0	3
16	Powell	--	12	--	12
27	Toole	3	6	8	10
35	Sweet Grass	83	70	34	27
38	Musselshell	35	5	5	22
41	Broadwater	19	65	40	9
42	Fergus	--	95	--	17
43	Phillips	--	111	--	23
44	Broadwater	21	11	6	15
45	Lake	41	23	12	16

NEW MEXICO

Rt. No.	County	Heard		Seen		Rt. No.	County	Heard		Seen	
		1961	1962	1961	1962			1961	1962	1961	1962
2	Bernalillo-					17	Valencia-				
	Sandoval--						Socorro	54	24	115	182
	Santa Fe	27	71	5	9	18	Valencia	19	9	20	32
6	Hidalgo	44	42	9	21	19	Chaves	15	19	17	0
7	Luna	45	58	40	79	25	Roosevelt	--	61	--	26
8	San Miguel	--	14	--	7	31	Socorro	100	67	66	222
9	San Miguel	--	9	--	13	32	Sierra	--	0	--	36
10	Chaves	25	15	29	11	33	Dona Ana	5	17	38	9
12	Chaves	74	21	22	15	34	San Juan	25	29	40	54
15	Rio Arriba	--	36	--	28	35	Santa Fe	39	55	7	35

NEW YORK

1	Niagara	--	26	--	4	6	Seneca	--	4	--	9
2	Niagara	--	47	--	9	7	Suffolk	33	20	11	6
3	Orleans-					13	Wayne	10	9	0	0
	Genesee	48	59	6	15	14	Ulster	22	30	2	4
4	Wayne-					16	Columbia	2	3	4	5
	Monroe	35	32	4	6	18	Dutchess	9	29	0	0
5	Seneca	--	4	--	5	19	Putnam	4	6	3	1

NORTH CAROLINA

16R	Hertford-					65R	Wilson-				
	Gates	37	19	42	24		Greene	27	53	48	57
22R	Surry-					70R	Macon	6	6	7	1
	Yadkin	22	39	21	30	77R	Mecklenburg-				
24R	Guilford-						Cabarrus	16	35	33	17
	Caswell--					80R	Montgomery-				
	Alamance	24	48	32	24		Moore	5	19	16	15
26R	Durham-					85R	Wayne-				
	Person	24	24	20	14		Duplin	44	61	49	42
36R	Wilkes-					92R	Jackson	4	1	2	0
	Caldwell	10	7	2	3	96R	Richmond-				
52R	Madison-						Montgomery	11	37	9	14
	Buncombe	5	3	8	2	98R	Hope-				
54R	Burke	4	3	0	3		Cumberland	55	27	21	22
58R	Davison	14	31	3	6	99R	Cumberland	59	30	24	8
60R	Randolph-					101R	Sampson	50	39	13	25
	Chatham	27	23	13	5	112R	Onslow	21	17	18	4
63R	Wake-										
	Johnson	32	33	33	36						

NEBRASKA

Rt. No.	County	Heard		Seen	
		1961	1962	1961	1962
1	Lancaster	80	95	107	73
2	Lancaster	100	60	79	61
3	Adams	45	39	62	68
4	Adams	52	36	41	51
5	Hamilton	83	52	81	105
9	Frontier	44	35	35	36

Rt. No.	County	Heard		Seen	
		1961	1962	1961	1962
10	Red Willow	7	10	16	29
11	Platte	24	24	69	75
12	Lincoln	43	17	73	74
14	Cherry	25	29	22	12
15	Cherry	--	15	--	74

NEVADA

1	Churchill	32	7	35	11
2	Clark	71	18	40	23
3	Clark-Mohave	29	5	62	29
4	Clark	4	12	22	52
5	Clark	17	0	18	0
6	Elko-White Pine	11	8	5	3
7	Elko	17	18	39	18
8	Lyon	8	13	6	2
9	Washoe	58	43	11	3
10	Lincoln	109	31	915	7
12	Pershing	37	1	406	6

13	Clark	2	0	1	0
14	Clark	14	23	2	7
15	Elko	60	45	18	5
17	Lincoln	15	0	2	2
18	Lyon	6	4	2	1
20	Lincoln	50	16	4	7
21	Lander	0	0	1	5
22	Lander	3	23	1	24
23	Elko	9	6	5	6
24	Lander	1	6	6	0
25	Lyon	0	1	0	6
26	Eureka	4	0	4	19

NEW HAMPSHIRE

2	Merrimac-Rockingham	3	0	1	0
3	Stafford, N. H. - York, Maine	5	5	1	0

4	Stafford	2	1	1	2
5	Stafford-Rockingham	5	5	1	0

NEW JERSEY

1	Sussex	8	5	4	6
2	Sussex	10	6	1	4
4	Hunterdon	15	11	9	9
5	Cumberland	2	4	6	7

7	Salem	31	28	2	0
9	Ocean	14	13	0	1
10	Hunterdon	20	25	16	18
11	Somerset	59	66	38	33

NORTH DAKOTA

Rt. No.	County	Heard		Seen	
		1961	1962	1961	1962
1	Burleigh	23	12	25	17
2	Burleigh	58	45	29	45
3	McHenry-				
	Bottineau	40	64	12	14
4	Sheridan	11	27	15	17
5	Stutsman	32	34	46	25
6	Stutsman	29	20	23	31
7	McHenry	57	43	23	12
8	Ward-				
	Renville	96	73	11	5
9	Ward	158	79	17	2
12	Ward	12	33	9	6
13	Ward	15	20	10	3
14	Burke	3	15	10	1

Rt. No.	County	Heard		Seen	
		1961	1962	1961	1962
15	Burke-				
	Ward	2	8	4	4
16	Williams	15	4	20	3
18	Walsh-				
	Pembina	33	27	25	16
19	Walsh	27	24	28	21
20	Sargent	53	39	21	13
21	Ward	13	16	13	7
22	Montrail	2	1	1	0
23	Starke	7	10	20	19
24	Golden				
	Valley	8	9	17	11
25	Kidder	11	13	14	10
26	McLean	11	29	19	16

OHIO

1	Ottawa	23	21	20	52
2	Franklin	7	15	17	23
3	Franklin	26	14	12	22
9	Franklin	14	11	24	29
10	Pickaway-				
	Ross	40	132	25	14
11	Athens	8	8	2	5
12	Wood	16	18	34	44
13	Wood	10	11	14	10

14	Wood	11	12	18	18
15	Wood	16	20	20	13
17	Union	41	37	19	17
18	Highland	37	33	12	10
19	Union	27	21	5	24
20	Delaware	69	44	10	14
21	Delaware-				
	Union	28	48	14	22

OKLAHOMA

4	Waggoner	18	25	30	20
6	Camache	26	16	8	9
9	MacIntosh	22	18	16	20
10	Kingfisher	46	47	66	63
11	Alfalpa	84	77	79	154

13	Muskogee	17	21	23	37
15	Love	107	103	158	82
16	Johnston	64	24	40	20
17	Woodward	143	130	34	28

OREGON

Rt. No.	County	Heard		Seen		Rt. No.	County	Heard		Seen	
		1961	1962	1961	1962			1961	1962	1961	1962
1	Umatilla	34	29	20	20	10	Wasco	38	29	15	29
2	Jackson	41	34	44	14	11	Morrow	68	43	73	54
3	Umatilla	44	75	38	51	12	Grant	49	42	25	17
4	Yamhill-					13	Bake :	20	9	54	17
	Polk	34	30	33	34	14	Harney	28	33	4	3
5	Klamath	75	15	10	5	15	Malheur	22	20	26	35
6	Deschutes	33	23	10	12	17	Hood River	10	24	12	21
7	Wasco	52	53	45	14	18	Lake	17	17	4	37
8	Linn	13	23	9	2	19	Jefferson	53	67	70	37
9	Douglas	113	69	1	15						

PENNSYLVANIA

2	Centre	2	3	1	2	14	Perry	12	19	4	2
5	Elk	3	3	0	0	15	Perry	16	13	5	13
6	Elk-					16	Indiana	3	8	2	0
	Jefferson	6	6	1	2	17	Indiana	18	10	5	1
8	Lycoming-					18	Franklin	95	54	13	53
	Clinton	0	1	0	7	20	Lancaster	12	20	24	36
10	Franklin	4	8	5	10	21	York	--	25	--	14
13	York	23	16	13	12						

RHODE ISLAND

2	Washington	13	11	2	1
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SOUTH CAROLINA

4R	Cherokee-					47R	Horry	40	29	20	14
	Cleveland					48R	Edgefield	26	16	15	7
	(N.C.)	36	35	63	71	50R	Aiken	44	43	37	22
6R	Oconee-					51R	Orangeburg-				
	Rabun (Ga.)	5	6	1	0		Aiken	32	28	4	3
10R	Union-					53R	Clarendon	40	76	19	52
	Chester	39	27	6	11	54R	Clarendon-				
14R	Chesterfield	53	64	30	18		Williams	24	29	0	5
18R	Laurens	31	24	34	38	56R	Williamsburg-				
25R	Marlboro	73	38	29	50		Georgetown	19	13	5	4
27R	Abbeville	32	22	13	6	59R	Orangeburg	22	21	7	7
32R	Kershaw-					60R	Orangeburg	47	33	19	42
	Richland	8	13	4	8						

SOUTH CAROLINA - Continued --

Rt. No.	County	Heard		Seen	
		1961	1962	1961	1962
70R	Berkley- Charleston	3	2	3	0
71R	Hampton- Jasper	35	49	27	6

Rt. No.	County	Heard		Seen	
		1961	1962	1961	1962
73R	Charleston- Dorchester	8	8	1	2

SOUTH DAKOTA

1	Brown	35	24	40	36
2	Brown	49	35	40	43
3	Hanson- Davison	28	16	57	12

4	Aurora	17	29	11	36
8	Hughes	44	39	24	6
9	Kingsbury	64	51	42	30
10	Lyman	25	8	6	30

TENNESSEE

6R	Macon- Allen (Ky.)	12	24	14	26
7R	Clay- Jackson	33	28	34	17
9R	Pickett- Wayne (Ky.)	21	12	42	30
10R	Scott- McCreary (Ky.)	5	9	3	2
14R	Dyer	19	18	74	78
20R	Dickson	27	19	43	40
23R	Smith	20	21	31	42
24R	Jackson	20	22	14	24
29R	Union- Claiborne	19	10	4	15
31R	Hawkins- Green	22	75	34	24
36R	Gibson	18	21	61	86
38R	Benton	55	66	46	60

44R	Cannon- DeKalb	25	20	30	49
47R	Morgan- Cumberland	16	18	1	0
53R	Lauderdale	21	18	67	62
55R	Crockett- Haywood	18	16	76	75
57R	Henderson	49	59	39	47
61R	Mauzy	28	28	21	18
63R	Rutherford	50	39	27	12
67R	Cumberland- Rhea	19	40	2	18
71R	Sevier	17	21	2	8
75R	Hardeman- Madison	22	33	13	15
84R	Grundy- Sequatchee	3	7	0	1
89R	Shelby	31	37	59	51

TEXAS

3	Robertson	32	26	24	39
4	Robertson	47	47	37	32
9	Wilson	414	135	193	65
10	Wilson	213	149	148	70

11	Victoria	8	23	45	44
12	Harris	20	6	52	15
13	Brazoria	17	16	18	33
15	Chambers	10	2	70	15

TEXAS - Continued --

Rt. No.	County	Heard		Seen	
		1961	1962	1961	1962
16	Travis	6	10	16	52
17	Titus	--	23	--	13
18	Kleberg	21	39	97	183
19	Crockett	41	35	9	20
20	Crockett	8	13	4	23
21	Val Verde	--	3	--	47
22	Val Verde	3	11	12	10
24	Thropmorton	--	55	--	95
25	Lubbock	3	1	17	2
26	Lubbock	3	4	19	7
27	Webb	19	21	45	67
28	Jefferson	23	11	99	20
29	Bexar	47	67	22	12
34	Hemphill	43	39	58	46
35	Hemphill	17	17	55	58
36	Randall	41	47	75	57
37	Randall	34	20	68	27
39	Potter	--	21	--	36

Rt. No.	County	Heard		Seen	
		1961	1962	1961	1962
42	Jefferson	24	12	90	29
43	Roberts	45	91	79	100
44	Roberts	36	60	44	76
45	Tom Green	34	19	118	42
48	Cameron	45	22	141	96
49	Dewitt	68	54	265	232
50	Bee	11	22	139	273
53	El Paso	0	3	17	74
54	Reeves	7	2	13	17
57	Dawson	14	53	13	18
58	Brown	86	74	89	62
59	Edwards	10	22	14	9
62	LaSalle	--	46	--	208
64	Smith	23	51	30	131
65	Hopkins	7	7	24	42
66	Nacogdoches	89	55	42	164
67	Nacogdoches	64	46	42	111

UTAH

1	Box Elder	--	35	--	54
2	Cache	13	3	28	10
4	Tooele	53	16	32	21
5	Juab-				
	Tooele	24	22	2	6
6	Box Elder	--	27	--	49
8	San Juan	4	2	68	81
13	Wayne-				
	Emery	8	49	66	10
16	Juab	46	48	64	50

17	Juab-				
	Millard	31	34	90	55
19	Garfield	11	11	4	0
23	Washington	51	40	28	23
24	Rich	49	40	31	87
27	Weber	--	8	--	12
28	Grand	4	6	8	3
29	Summit	3	8	21	9
30	Juab	36	27	46	75
31	Summit	--	19	--	4

VERMONT

1	Addison	0	2	1	0
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VIRGINIA

Rt. No.	County	Heard		Seen		Rt. No.	County	Heard		Seen	
		1961	1962	1961	1962			1961	1962	1961	1962
2R	Smythe-Tazwell	6	6	0	0	8R	Richmond-Westmoreland	47	41	56	44
3R	Pittsylvania	108	57	21	12	9R	Cumberland-Buckingham	47	45	7	39
4R	Rockingham-Augusta	5	9	3	0	10R	Sussex-Dinwiddle	15	20	29	16
5R	Shenandoah	13	10	2	3	11R	South Hampton-Sussex	71	84	28	43
6R	Loudoun-Prince William	33	37	14	9						
7R	Prince William-Fauquier	40	24	3	4						

WASHINGTON

1	Spokane	36	15	27	27	8	Yakima	120	111	209	222
2	Douglas	23	33	51	22	9	Yakima	37	47	187	199
3	Spokane	16	37	15	12	10	Yakima	16	15	97	71
4	Whitman	21	29	24	26	12	Yakima	23	36	84	142
5	King	0	0	0	0	13	Ferry	26	42	0	1
6	Okanogan	49	77	90	106	14	Stephens	28	23	1	9
7	Skagit	0	5	9	1						

WEST VIRGINIA

1	Hampshire	13	25	2	3	3	Mason	10	21	5	15
2	Mason	3	9	25	18						

WISCONSIN

1	Dane-Columbia	38	32	17	16	9	Sauk	27	12	4	0
2	Columbia	46	30	11	9	12	Dane	32	29	9	5
3	Iowa	43	30	1	4	13	Adams	43	36	3	9
4	Green	26	15	6	4	17	Winnebago	4	5	6	4
5	Jackson	49	44	10	5	18	Winnebago	11	8	20	2
6	Dunn	70	44	7	7	19	Kenosha	25	24	12	9
7	Dunn	64	15	12	10	20	Grant	18	4	4	7
8	Adams	38	53	15	28	21	Vernon	23	22	12	8
						22	Dodge	22	3	4	2

WYOMING

Rt. No.	County	Heard		Seen	
		1961	1962	1961	1962
2	Hot Springs	5	4	4	25
3	Natrona	40	20	9	2
4	Carbon	17	23	14	19
5	Fremont	24	26	3	7
7	Platt	--	55	--	40
8	Washakie	32	29	51	17
10	Carbon	2	9	5	11
12	Uinta	6	3	0	2
13	Niobrara	38	16	14	5

Rt. No.	County	Heard		Seen	
		1961	1962	1961	1962
14	Big Horn	27	20	2	3
15	Lincoln	2	3	1	1
16	Campbell	94	92	202	30
17	Sweetwater	--	11	--	0
19	Albany	0	2	0	2
21	Laramie	47	27	19	26
22	Johnson	7	42	5	4
23	Park	5	4	2	3

The Department of the Interior, created in 1849, is our Nation's Department of Natural Resources, concerned with management, conservation, and development of water, wildlife, fish, mineral, forest, and park and recreational resources. It also has major responsibilities for Indian and Territorial affairs.

As America's principal conservation agency, the Department works to assure that nonrenewable resources are developed and used wisely, that park and recreational resources are conserved for the future, and that renewable resources make their full contribution to the progress, prosperity, and security of the United States, now and in the future.



UNITED STATES DEPARTMENT OF THE INTERIOR
Stewart L. Udall, Secretary

Frank P. Briggs, Assistant Secretary for Fish and Wildlife
FISH AND WILDLIFE SERVICE

Clarence F. Pautzke, Commissioner
BUREAU OF SPORT FISHERIES AND WILDLIFE
Daniel H. Janzen, Director